

REMARKS/ARGUMENTS

This amendment is submitted in response to the Office Action dated June 1, 2005. Reconsideration and allowance is respectfully requested.

Claims 1-10 and 18-37 remain in this application. Claims 11-17, and 38-52 were withdrawn as a result of an earlier restriction requirement.

Claim Rejection Under 35 USC 103

Claims 1-10 and 18-37 were rejected under 35 USC 103(a) as being unpatentable over Published Application No. 2003/0207538 to Hshieh et al. (herein after "Hshieh") in view of Published application 2005/0048701 to Minato (hereinafter "Minato"). This is respectfully traversed.

Claims 1-10:

Claim 1 distinguishes over the cite references taken singly or in combination at least by reciting:

A Schottky diode comprising ... a plurality of charge control electrodes ... wherein at least two of the plurality of charge control electrodes are electrically decoupled from one another so as to be biased differently from one another.

In the Office action, the Examiner identifies polysilicon gates 210 in Fig. 4 of Hshieh as corresponding to the claimed "plurality of charge control electrodes." This is respectfully traversed because no two polysilicon gates 210 in the rectifier portion of the structure shown in Fig. 4 are biased differently from one another, as required by claim 1. Hshieh in Fig. 4 clearly delineates the region where the DMOS transistor resides from the region where the rectifier resides. In Fig. 4, Hshieh also clearly shows all the polysilicon gates 210 in the rectifier region are electrically connected together and thus **cannot** be "biased differently from one another" as recited in applicants' claim 1. Thus, Hshieh fails to teach or suggest the above-cited limitations of claim 1. Similarly, Minato nowhere teaches or suggests the above-cited limitations of claim 1. Thus, claim 1 and its dependent claims 2-10 distinguish over Hshieh and Minato taken singly or in combination at least for the above reason.

Claims 18-32

Claim 18 distinguishes over Minato at least by reciting "the first trench having at least one diode therein." The Examiner asserts that in Fig. 13 of Minato, the applicants' claimed "first trench" is shown by the silicon region bounded by adjacent trenches 23. This is respectfully traversed because the Examiner's characterization of the silicon region bounded by trenches 23 as "a trench" is supported neither by Minato nor by the ordinary meaning of the term "trench," and as such amounts to a completely arbitrary construction of the term "trench." The term trench appears repeatedly through out the Minato reference. In every instance, Minato has used the term "trench" consistent with its ordinary meaning, namely, an opening. Similarly, the applicants have used the term "trench" repeatedly in the present application, and in every instance "trench" has been used consistent with its ordinary meaning (i.e., an opening). In Fig. 13 of Minato, the silicon regions bounded by trenches 23 clearly are not in trenches or in openings, but rather form part of the original silicon. Accordingly, without providing any support, the Examiner's characterization of "a trench" as any bounded silicon region amounts to an arbitrary construction of the term trench, and is thus improper. Further, the Examiner's arbitrary characterization of the term "trench" improperly vitiates this term out of applicants' claims. Claim 18 thus distinguishes over Minato at least for the above reasons.

Claim 18 as amended, includes other distinguishing features such as: "wherein no current flows through the first trench when the Schottky diode is biased in an on state." Minato nowhere teaches or suggests this limitation. Thus, claim 18 further distinguishes over Minato for this additional reason.

Hshieh also fails to teach or suggest the above-referenced limitations of claim 18. Thus claim 18 and its dependent claims 19-32 distinguish over Hshieh and Minato taken singly or in combination at least for the above reasons.

Claims 33-38

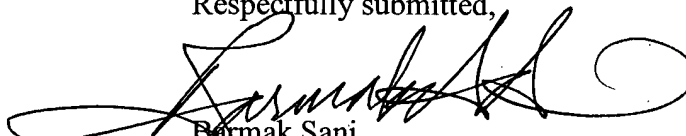
Claim 33 includes similar limitations to those of claim 18 referenced above, and thus claim 33 and its dependent claims 34-38 distinguish over Minato and Hshieh taken singly or in combination at least for the same reasons as does claim 18.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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